

REMARKS

Claims 1-24 are pending in this application. All of the claims were rejected.

With this amendment, claims 1, 12 and 13 are amended. The amendments to claim 1 are not intended to narrow the scope of the claim and do not add new matter. The Amendments to claims 12 and 13 address the rejections under 35 U.S.C. §112 and 35 U.S.C. §101 and also do not narrow the claim or add new matter. Following the amendment claims 1 and 14 remain as the independent claims in application.

Interview Summary

Applicants thank the Examiner for the courtesy of a telephone interview on June 14, 2006. During that interview, Applicant's representative explained the differences between the test method in the Patel reference and that disclosed in the present application. The lack of a motivation to combine the Patel and Pahr references was also discussed.

Applicants understood the Examiner to agree that the claims as pending in the application are not obvious in light of the prior art of record.

Applicants also agreed to make changes to the form of claim 12 which will address the rejections under 35 U.S.C. §112 and 35 U.S.C. §101.

The following remarks and amendments presented with this response may serve as a further summary of the interview.

Claims Rejections under 35 U.S.C. §112

Claim 12 was rejected under 35 U.S.C. §112 as being indefinite for failing to recite how parameters were used to adjust the manufacturing process. Claim 12 has been amended to overcome this rejection.

To address the Examiner's concern that claim 12 recited a process but depended from claim 1 which recites a method, claims 12 and 13 have been amended to expressly indicate that both relate to a method, which is consistent with claim 1.

Claim Rejections under 35 U.S.C. §101

Claims 12 and 13 were rejected under 35 U.S.C. §101 for reciting a use, without setting forth any specific steps involved in a process. The amendments to claim 12 should also resolve this rejection.

Claim Rejections under 35 U.S.C. §103

Claims 1-14 have been rejected under 35 U.S.C. §103 based on various combinations of references. Each combination includes at least Patel (U.S. Patent No. 6,759,864) and Pahr (U.S. Patent No. 5,294,791). Applicants respectfully disagree that this combination of references teaches all elements of any of the independent claims. None of the other references, even if combined with Patel and Pahr, would teach or suggest all the limitations of any independent claim. Accordingly, the rejection of all the claims under 35 U.S.C. §103 should be withdrawn.

Patel, like the present application, relates to testing of semiconductor chips. However, the approach of Patel is different than the test approach described and claimed in the present application. Patel describes a system in which power transient signals are measured for a device under test. The measured power transient signal is compared to a reference signal from a defect-free reference integrated circuit or other source of a reference signal (column 4, lines 5-11).

The present application describes performing a measurement on a differential signal and does not describe power transient signal analysis. Accordingly, Patel does not teach multiple limitations of claim 1. For example, Patel does not teach “introducing a plurality of bias levels into the comparison, whereby the output of the comparator has a logical value representative of a value at the first input compared to a value at the second input offset by the bias level.” Patel also does not show or suggest “taking a plurality of sets of samples of the output of the comparator, with a set of samples for each of the bias levels.” Further Patel does not describe “selecting a set of samples based on the percentage of samples in the set having a first logical value.” Nor does Patel describe “associating the bias value used to take the samples in a selected set with a value of the differential signal at the point on the waveform.”

Claim 14 recites an automatic test system for making measurements of a differential signal, which is different than the test system in Patel used for measuring power transient signals. Accordingly, Patel does not teach multiple limitations of claim 14. For example, Patel does not teach a comparator that has “a timing input controlling the time at which a comparison is made.” Nor does Patel show a test system that includes “means for biasing the comparison by a variable

amount in response to a control system.” Patel also does not teach “control circuitry” providing a timing signal and a control signal to the means for biasing”. Patel also does not teach “data analysis circuitry” as claimed.

Pahr does not teach modification of Patel to include all limitations of the claims and the cited references do not create a *prima facie* case of obviousness against either claim 1 or claim 14. Other than mention of a bias signal, Pahr does not teach or suggest the limitations of the claims not shown in Patel. Even if combined, Patel and Pahr would not teach all of the limitations of either claim. Further, there is no motivation to combine the references. Pahr relates to a system for controlling the position of a magnetic head relative to a magnetic tape. It does not relate to testing semiconductor devices. Though Pahr mentions a bias signal, there is no teaching or suggestion to incorporate such a bias signal used to read a tape into the semiconductor test system of Patel.

The Examiner asserts that one of skill in the art would have been motivated to incorporate a bias signal in the system of Patel to compensate for total power dissipation of the chip. Applicants respectfully disagree that such motivation exists. Because the power dissipation of the chip is used as an indication of whether the chip is functioning properly, compensating for variations in the power dissipation would destroy the usefulness of the test method of Patel. Accordingly, the asserted reason for combining the references would not, in fact, motivate one of skill in the art to modify the system of Patel based on Pahr.

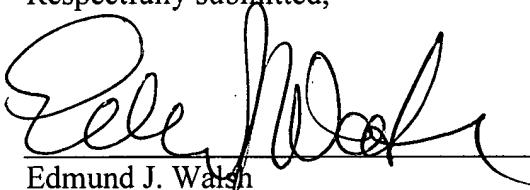
Accordingly, each of claims 1 and 14 recites a combination of limitations that is not shown or suggested in Patel, whether or not combined with Pahr. The remaining claims depend either directly or indirectly from either claim 1 or claim 14. The rejections of the dependent claims should be withdrawn for at least the same reasons as the rejections of the independent claims. The dependent claims recite further features distinguishing the references and provide further reasons for withdrawing the rejections of these claims.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,
By: 
Edmund J. Walsh
Registration No. 32,950
WOLF, GREENFIELD & SACKS, P.C.
Federal Reserve Plaza
600 Atlantic Avenue
Boston, Massachusetts 02210
Tel: 617-646-8000